

## **Appendix 2.6 - 2005 Board of Scientific Counselors Review**

***Board of Scientific Counselors Review Report***

***HHE Program Response***

## **HHE Review Team Draft Report**

### **March 30, 2006**

#### **Background:**

Health Hazard Evaluations (HHEs) are a responsibility of NIOSH under the Occupational Safety and Health Act and the Mine Safety and Health Act. These Acts call for NIOSH to perform worksite evaluations when requested by an employer or a representative of employees to examine potentially toxic effects of chemicals in the workplace. HHEs often identify emerging risks, or for existing risks, are used to assess risks at exposures below regulations. As a result, HHEs often provide the early data for later creation of national standards, or provide data that allow NIOSH to comment on proposed OSHA regulations.

In 2005, the Director charged the BSC Review Team to review and appraise the directions, strategies and activities of the NIOSH HHE Program. The Review Team from the Board of Scientific Counselors consisted of Joel Haight, Kathleen Brown, Bob Reville, and David Warheit. After telephone conferences with HHE leadership and review of documents describing the HHE program, personnel, budgets, templates for reports, representative HHE reports, and the 1997 BSC Review Team Report, members of the Review Team site visited the Hazard Evaluations and Technical Assistance Branch (HETAB) in Cincinnati on November 21, 2005 and Division of Respiratory Disease Studies, Field Studies Branch (DRDS) in Morgantown, WV on January 18, 2006. The HHE Program is scheduled to be evaluated by the National Academy of Sciences in the 2007-2008 time frame.

#### **Observations:**

The HHE program is considered the “face of NIOSH” or the “flagship of NIOSH” and a great deal of pride in this program was evidenced at the site visits to both HETAB and DRDS. Staff at both locations are outstanding scientists, dedicated in their commitment to the occupational health and safety of the nation’s workplaces, and enthusiastic about their contributions to science.

While trained as epidemiologists, industrial hygienists, physicians or other specialties, NIOSH staff are also generalists, given the nature of their responsibilities. The staff of the HHE program have unique skills for field studies. Besides technical capabilities, they are accustomed to interacting with stakeholders. And as one of the NIOSH HHE staff members said, they are "comfortable sleeping in tents."

As a result of these skills, over the last few years the HHE staff have been increasingly relied upon to perform technical assistance and health evaluations in the context of disasters. HHE staff were called in to monitor health conditions of rescue workers after 9/11, and during the clean-up. They were instrumental in evaluating the air quality after the anthrax attacks. In addition, they have been providing international technical assistance, including some work on SARS, and most recently they were deployed to

assist with the Hurricane Katrina disaster. HHE program staff are continuing to conduct field assessments of mold, dust and other contaminants. They also are conducting a study of illness, injury and mental health among the New Orleans police officers.

The workload of the HHE staff is increasing and now includes HHE evaluations (on-site and by document review), technical assistance provided to other government agencies and to industry nationally and internationally (in telephone calls as well as email), seeking funding to support scientific research of emerging problems, conducting and disseminating research in presentations and publications, disaster management and participation on special work groups/committees. The staff did not provide evidence of a systematic way to prioritize the demands on their time. They do not appear to work on deadlines due to competing priorities and often juggle 12-15 projects at a time. The staff also handles a significant number of calls to their 1-800 line.

One issue that the HHE program faces is that their budget has remained fixed or has declined, while the demands for industrial health hazard evaluations have been stable, and an increasing fraction of their time is now being spent on technical assistance after disasters. On top of that, they are losing staff because their emergency response capabilities are in demand elsewhere in the federal government resulting in transfers, the retirements of commissioned corps officers, and because of difficulty with retaining positions for staff and maintaining funding for appropriate replacements. For example, HETAB lost 25% of their staff in 2005, while 25% of staff time has been devoted to Katrina. Currently, replacements are made by hiring employees who are called Fellows. The Fellows are not eligible for job benefits. When permanent positions become available, the Fellows are eligible to apply.

Communication with requestors has been an HHE priority since the 1997 BSC Review. Templates for follow-ups and smaller, easier to interpret reports have now been developed and revised. Telephone communication with requestors has improved. For example, an assigned staff member at DRDS is devoted to this responsibility. Requestors receive updates at periodic intervals on the progress of their site visit reports. Staff workload is considered the key factor influencing the timeliness of completion of final reports. On the other hand, HHE staff state that this time delay often has a beneficial effect in that it sometimes provides leverage from NIOSH to encourage the industry to make changes prior to receiving the final NIOSH report.

The opportunity to fulfill the mission of the HHE Program is compromised by the complex balancing of priorities between providing service vs. applied research through investigating requests. “Service” refers to requests from employers, employees and employee representatives for routine technical assistance, while “applied research through investigating requests” may involve research efforts needed to identify emerging risks. One manifestation of this question is the number of Indoor Environmental Quality (IEQ) evaluations the HHE Program conducts. While most requests are handled by a letter rather than a visit, the HHE Program probably needs to process even fewer IEQ evaluations. Although a description of the NIOSH HHE Program and procedures for requesting an HHE are available on the web, the fact that the bulk of requests are

generally from the geographical area of the mid-Atlantic-may demonstrate the public's general lack of awareness of the HHE Program. One staff member referred to the HHE as a "stealth program that nobody knows about." Because occupational conditions within industry in the US are always changing (as well as expectations regarding healthy workplaces), new work-related health conditions will always be expected to emerge. Unfortunately, inappropriately targeted outreach to the public may only result in more of the same requests (i.e., conditions that have already been identified and are well understood). For example, in the 1990s, the program was mentioned on CBS News once and, as a result, the HHE Program received 1200 indoor air quality requests in 3 days. This suggests that there may be an enormous latent demand for the HHE Program service, however this may not result in improvements in rare but serious occupational conditions/situations that require immediate attention. The workload would increase and incentives for publicizing the program in an attempt to look for new and emerging risks are currently *negative*. One area that the HHE Program has had some impact and can continue to have an impact is in the area of debunking junk science, like indoor mold sampling and hair analysis for mercury.

A critical issue is how the HHE Program demonstrates its success. As stated in the 1997 review, ongoing methods to demonstrate its impact are needed. Annual goals and quantifiable objectives/performance measures are lacking. Developing goals and objectives that are measurable will be essential for defining the priorities and productivity of the HHE Program in light of what can be accomplished with the resources. These measurable goals should include developing a mechanism to measure post corrective action hazard levels, to determine if control and reduction methods worked. A customer satisfaction measure should also be considered. It was noted that a mechanism is in place to measure customer satisfaction, however, data have not been analyzed. Managing work processes more efficiently and setting and measuring goals as a management approach should be emphasized.

### **Recommendations:**

We believe that the HHE Program is an innovative customer-oriented, field research approach to evaluating and problem-solving emerging occupational health risks. This program has been a significant component of NIOSH over the years and needs to be maintained or enhanced. With this in mind, we have the following recommendations:

- Reconceptualize the mission of HETAB and DRDS. The NIOSH HHE Program should be clearly focused on responding to employer/employee requests to evaluate potential health hazards with an eye toward identifying emerging risks and its increasing role in occupational health and safety issues related to disaster management. -Increasing the HHE role in disaster management is important. In addition, the HHE Program functions in an important role by coordinating/serving as a conduit to bring other government partners to provide additional assistance in identification of the risks and resolution of the problem.

- 1) HETAB's mission should be the investigation of *non-respiratory conditions, underserved populations, and disaster management*.
  - 1) The mission of DRDS should be to resolve health issues related to *respiratory conditions*.
  - 2) More triage is needed to reduce the number of open projects/project officer.
  - 3) Routine IEQ requests should no longer be a responsibility or priority of the NIOSH HHE Program.
- To demonstrate success or impact and **improve the efficiency of processes, prioritization of tasks and overall management of the program**, NIOSH needs to):
    - 1) Develop annual goals and measurable objectives regarding the work products, priorities, and work processes of the HHE Program that are practical, cost-effective and consistent with resources. For example, the HHE Program could propose annually that the HHE Program would participate in a defined number of research projects annually, a defined number of summaries of classes of hazards would be produced annually, HHE staff would respond annually to a defined number of requests that are respiratory related and a defined number of requests that are non-respiratory related, that \_\_\_\_% of staff time annually would be devoted to requests from other federal agencies or international requests, # of interagency committees or technical assistance completed, that \_\_\_\_% staff would be deployed annually to other projects including disaster management, that an annual report would be produced that documents changes occurring at worksites following site visits, as well as data above. For a health hazard evaluation program to be successful in the classical sense (identify, quantify, control), it must include a mechanism for playing a role in and measuring the effectiveness of the control step. Once a health hazard has been eliminated or reduced, success should be measured in terms of reduction or elimination of the health hazard. (A simplified example of this may be a clearance sample taken after an asbestos clean-up project to prove that the asbestos has been removed to the point where it no longer poses a health concern. While different approaches to management of this suggestion is possible, specific goals can be proposed to staff, individual teams can define business plans to meet these goals efficiently, and then the teams can be measured against these plans. The aggregate goals can be the sum of the team plans.

- 2) Produce an annual report that demonstrate the outcomes of HHE Program
  - 3) Utilize evaluation consultants and researchers from e.g., the University of Cincinnati or West Virginia University (faculty or PhD students) to assist with development of reports and follow-up analyses, e.g. annual reports, results of follow-up surveys.
- Identify the critical mass of staff and specific disciplines needed to perform essential functions at each location. For example, support for a HETAB statistician, lab technician, and writer have been reduced or eliminated. In addition, a critical mass is no longer present in the Atlanta field office (reduced from 5 to 2 staff members) and EIS (Epidemic Intelligence Service) officers have decreased from 5-6/year to 0-1/year. More full-time positions are needed at all locations. DRDS staff would have to increase to manage all respiratory non-routine applied research and service efforts. There is an urgent need for the addition of PhD prepared research industrial hygienists at DRDS.
  - Consider promoting the HHE Program more widely, to cast a larger net, in an effort to capture more emerging conditions, and then select only the evaluations that truly serve program goals (improving science, informing standards, identifying emerging risks, and addressing risks for underserved populations). In other words, NIOSH should publicize more to elicit more requests. This effort would allow NIOSH to respond to employer and employee requests related to conditions that do not have well-defined criteria. Conditions with well-defined criteria can be triaged to OSHA consultation and private occupational health and safety professionals/consultants.
    - 1) Publicize the NIOSH HHE website at industry/union conferences and in publications.
    - 2) Improve the website to direct routine IEQ requests to local consultants or OSHA consultation programs.
    - 3) Expand the website by including HHE reports without publishing the name of the company where the evaluation occurred. The current practice of publishing the name of the company may tend to discourage open participation.
    - 4) Promote DRDS as a Center for Excellence on Respiratory Diseases to better publicize the capability of this group.
  - Include an estimate of savings from reduced health problems in all reports, so that the requestor will have information that the health benefit from recommendations for the purchase of equipment (such as respirators) exceeds the increased cost.

Lack of information about costs in current reports may lead to a lower likelihood that HHE recommendations are implemented or that HHE investigations are requested. Recommendations should focus on practical, cost-oriented recommendations that are likely to be implemented.

- The overall budget for the HHE program should be evaluated to ensure that it is or can be made commensurate with the current HHE program and mission. It is likely that the HHE Program has a significant beneficial impact on NIOSH's overall mission that is disproportionate to the funds they receive. We recommend that the HHE Program receive a larger share of the pie. This program performs a truly unique public service and allows for the collection of data that serves the public interest and is otherwise unobtainable.

-



# Health Hazard Evaluation Program

**Response to the BSC Review Report, October 2006**

**Allison Tepper, PhD – Chief, HETAB**

**Kathleen Kreiss, MD – Chief, FSB**





# BSC Review Process

- HHE overview presented to BSC
- NIOSH Director requested BSC review
- BSC created working group (J Haight, K Brown, B Reville, D Warheit)
- HHE program provided briefing materials
- Working group members visited Cincinnati & Morgantown (1 day at each site)
- Working group issued draft report



# BSC Review Context

- HHE – 1 of 4 NIOSH programs to be reviewed by the National Academies in 2007
  - HHE program met with NA framework committee to discuss whether and how to evaluate
    - Different approach for HHE evaluation
  - 1<sup>st</sup> meeting of review panel – March 2007



# NA Charge for the HHE Program Review

- Impact in reducing worker risk and preventing occupational illness in investigated workplaces.
- Impact in transferring program-generated information to relevant employers and employees beyond the investigated workplaces.
- Impact on NIOSH research and policy-development.

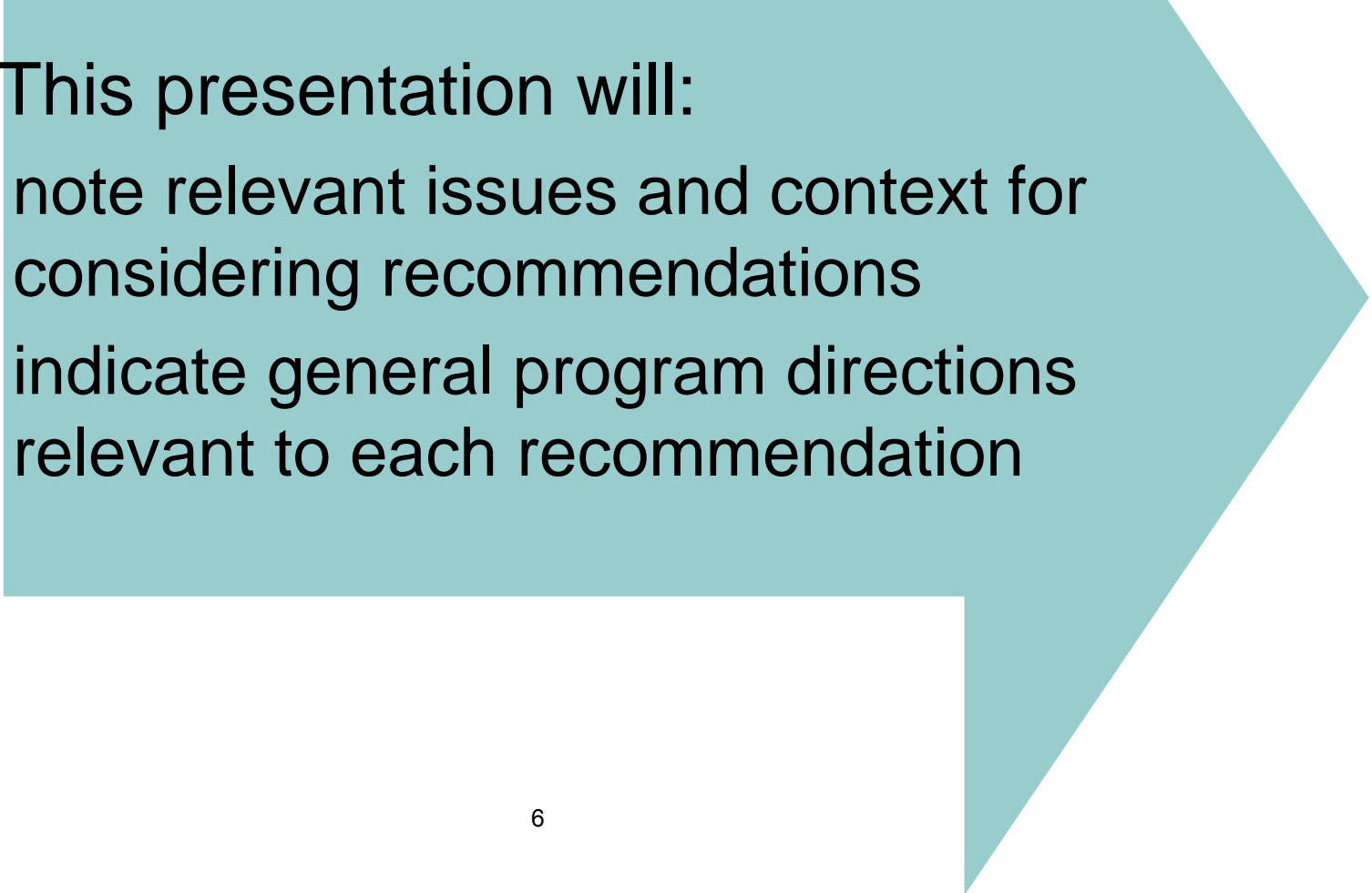


# NA Charge for the HHE Program Review

- Impact on the activities of regulatory agencies, occupational safety and health professionals and organizations, state and local health agencies, and others in the occupational health community, as achieved by transferring program-generated hazard and prevention information.
- The relevance of the program in addressing current and emerging workplace health hazards.

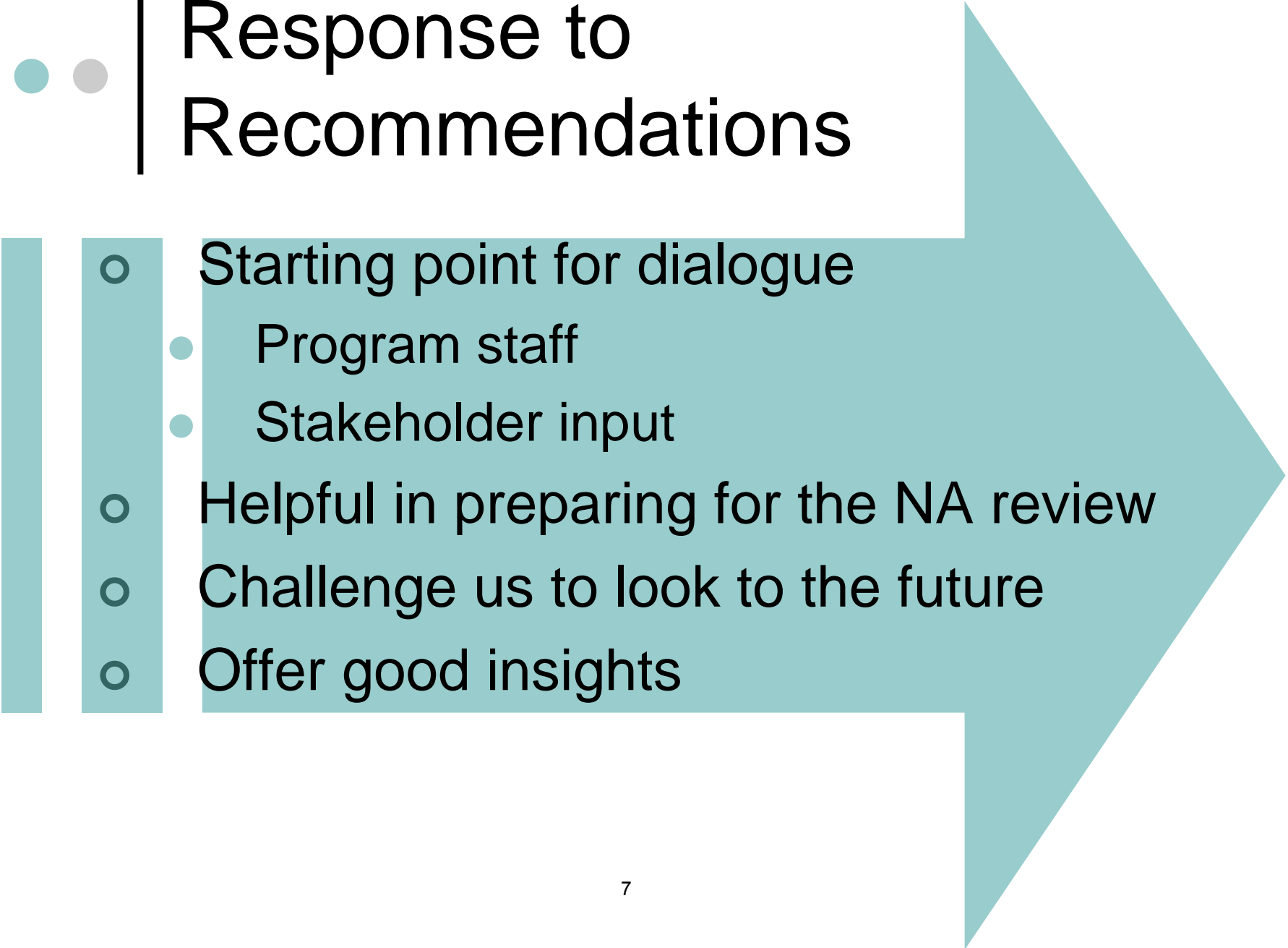


# Response to Recommendations

- 
- This presentation will:
    - note relevant issues and context for considering recommendations
    - indicate general program directions relevant to each recommendation



# Response to Recommendations

- 
- Starting point for dialogue
    - Program staff
    - Stakeholder input
  - Helpful in preparing for the NA review
  - Challenge us to look to the future
  - Offer good insights

# Reconceptualize the Mission

HETAB's mission should be the investigation of non-respiratory conditions, underserved populations, and disaster management. The mission of DRDS should be to resolve health issues related to respiratory conditions.



- Respiratory vs. non respiratory
  - Focus on strengths, potential for impact
  - Enhance collaborations
- Underserved – cross-cutting issue, Institute priority
- Disaster management
  - HHE program staff support disaster mgmt in NIOSH OD
  - Capitalize on NIOSH-wide experience & expertise


# Reconceptualize the Mission

More triage is needed to reduce the number of open projects per project officer.



- Balancing resources with triage priorities – mgmt challenge
  - Knowledge gaps
  - New & unrecognized hazards
  - Illnesses with unknown cause
  - Unregulated exposures
  - Health effects occurring when exposure < standards
- IEQ efforts
  - Screening before assignment
  - Form letters with information


# Reconceptualize the Mission



Routine IEQ requests should no longer be a responsibility or priority of the NIOSH HHE program.

- Relevance, impact, balance
  - IEQ: 200-250 request/yr; ~10% have onsite evaluation
  - Recognize worker health & business productivity impact
- Need to know
  - Impact of disseminating guidance documents
  - Mechanisms for and effectiveness of offering information in lieu of submitting requests

# Improve Efficiency, Prioritization, and Overall Management



Develop annual goals and measurable objectives regarding the work products, priorities, and work processes.

- Strategic planning process underway
  - Mission statement
  - Strategic goals: outcomes with ~ 10-yr timeframe
    - Reducing illnesses and exposures
    - Identifying emerging issues
    - Enhancing federal disaster role
  - Intermediate goals: outcomes with ~ 3 to 5-yr timeframe
  - Annual goals: objective, quantifiable measures of outputs

# Improve Efficiency, Prioritization, and Overall Management

Produce an annual report that demonstrates outcomes.

- Annual reports can be a useful tool to explain and promote the program
  - Audience
  - Content
  - Form

# Improve Efficiency, Prioritization, and Overall Management




Utilize evaluation consultants and researchers from nearby universities to assist with development of reports and follow-up analyses

- Interagency agreement – Office of Personnel Management
  - Analyzing FY 2001-2005 followback surveys
    - First report – October 31
  - Recommending questionnaire improvements
  - Developing template for future reports
- University relationships
  - Statistical project support, as needed
  - Training occupational health professionals


# Promote the HHE Program More Widely

... and select only the evaluations that truly serve program goals.


- 
- Define our goals thru strategic planning
    - Target outreach to match goals where there are opportunities for impact
  - Provide responsible response

# Promote the HHE Program More Widely

Publicize the website at industry/union conferences and in publications.

- 
- Align efforts with program goals and priorities
  - Work within travel constraints
  - Identify new ways to reach nontraditional stakeholders
    - Underserved populations
    - Non-union workers

# Promote the HHE Program More Widely



Improve the website to direct routine IEQ requests to local consultants or OSHA consultation programs.

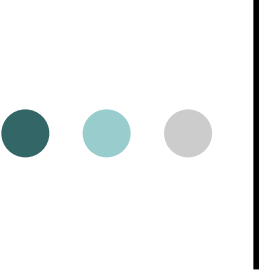
- Large % of employee requests
- Lack of OSHA regulation
- Disappearance of many state-level programs
- They refer to us!

# Promote the HHE Program More Widely

Remove company names from HHE reports posted on the website.



- Are there legal requirements? No
- Do “named” reports discourage HHE requests?
  - Maybe – unknown magnitude
- Does FOIA also play a role?
  - Yes
- Are there benefits to “named” reports?
  - Maybe



# Promote the HHE Program More Widely



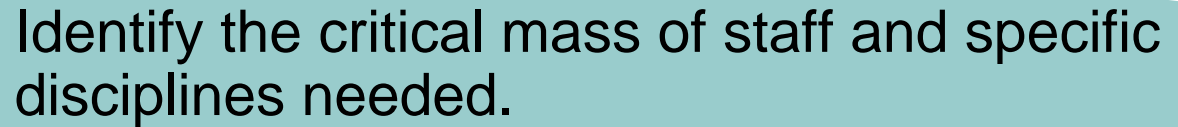
Promote DRDS as a Center for Excellence on  
Respiratory Diseases.



- Contributions to HHE program goals
  - Emerging issues
  - Filling in research gaps
  - Providing input into policy
- Recognition by peers in OH&S professions



# Other



Identify the critical mass of staff and specific disciplines needed.



- Aligning decisions with good organizational health plans
- Developing succession plans
- Looking ahead for emerging issues
- Maintaining flexibility to respond to shifting priorities

# Other


Include an estimate of savings from reduced health problems in all reports.



- Staffing
  - Do we have the right people?
- Data
  - Does the information exist?

# Other

Increase the budget for the HHE program.

- 
- Proposal to engage in the NORA 2 process with the receipt of non-competitive NORA 2 funding
    - Involves HHE program in 4 priority sectors – services, healthcare, manufacturing, construction
    - 2-way exchange of information strengthens all programs



# Moving Ahead



- We say thank you to the review committee for diligent and thoughtful work!
- We affirm that the HHE Program is a critically important to the NIOSH mission and are committed to its vitality and excellence.
- We look forward to a continuing dialogue with you and the larger community of stakeholders.